

May 2014 at Sri Venkateswara Institute of Medical Sciences, Tirupati, India. Patient characteristics, procedural details, in-hospital and 3 month adverse events were assessed.

**RESULTS** One thousand patients were enrolled in this study. Mean age was 54.5±11.3 years. Among the study population 82.9% were males, 32.8% had diabetes mellitus while 36.3% had hypertension. 6.0% were in cardiogenic shock. Only 18.2% came to hospital by ambulance. Most frequently (57.9%) left anterior descending artery was infarct related artery. Mean time from symptom onset to hospital arrival was 369.6±204.6 minutes and mean door to balloon time was 58.63±17.07 minutes. In-hospital adverse event rate was 5.7% (mortality rate-3.6%, non-fatal reinfarction-0.9%, stroke-0.3%, major bleeding-0.9%). Patients without cardiogenic shock had in-hospital survival rate of 99.1%. During 3 month follow up 0.9% died and 0.8% had non-fatal reinfarction. Three month survival rate was 95.5%.

**CONCLUSIONS** Primary percutaneous coronary intervention is feasible in Indian scenario with acceptable door to balloon time and low adverse event rates despite longer time to presentation. There is a need to improve the emergency medical services or ambulance system to reduce the symptom onset to hospital arrival time to achieve better outcomes.

#### GW26-e0460

##### Decreased Admission Serum Adiponectin Level Predicts Poor Myocardial Blood Flow in ST-Segment Elevation Myocardial Infarction Patients Undergoing Primary Percutaneous Coronary Intervention

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**OBJECTIVES** Adiponectin (APN) has multiple protective effects vascular endothelium including anti-inflammatory, stabilizing coronary plaque, and anti-atherogenic properties. The aim of this study was to evaluate the effects of admission APN and coronary blood flow in ST-segment elevation myocardial infarction (STEMI) patients undergoing primary percutaneous coronary intervention (PCI).

**METHODS** A total of 206 consecutive patients with ST-segment elevation myocardial infarction admitted to a single invasive heart center and treated with primary percutaneous coronary intervention from July 2013 to August 2014 were included. Blood samples were drawn immediately before the invasive procedure. Serum adiponectin was measured using enzyme-linked immunosorbent assay (ELISA).

**RESULTS** Patients with low adiponectin (quartile 1) had poor myocardial perfusion compared to patients with high adiponectin (quartiles 2-4). Thrombolysis In Myocardial Infarction (TIMI) flow grades (TFGs) 0-2 had no statistically significant difference between 2 groups, but corrected TIMI frame count (CTFC) was higher in patients with low adiponectin (quartile 1) (27.1±17.1 vs 23.1±12.3,  $P < 0.05$ ). Admission serum APN levels were correlated significantly and inversely with CTFC in STEMI patients undergoing primary PCI ( $r = -0.34$ ,  $P < 0.001$ ).

**CONCLUSIONS** Admission decreased serum APN levels are associated with impaired myocardial flow in STEMI patients undergoing primary PCI.

#### GW26-e0726

##### Statin-induced Reduction of Plaque Vulnerability is Attenuated in Poorly Controlled Diabetic Patients with Coronary Atherosclerosis Disease: Serial Optical Coherence Tomography Analysis

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**OBJECTIVES** The incidence of cardiac events has been known to be higher in diabetic patients even after lipid-lowering therapy. The aim of this study was to compare statin-induced changes of plaque vulnerable characteristics in patients without diabetes mellitus (DM) and with well or poorly controlled DM measured by Optical Coherence Tomography (OCT).

**METHODS** We identified 99 non-culprit lipid-rich plaques from 75 coronary atherosclerosis disease patients receiving intensive or general statin treatment and 3-vessel OCT imaging over 12 months. Patients were divided into 3 groups on the basis of diabetic status and

baseline hemoglobin A1C (HA1C) level: Group A (non-DM, n=34), Group B (DM with HA1C<8.0%, n=22), and Group C (HA1C≥8.0%, n=19).

**RESULTS** Although the LDL-C decrease levels were similar, the percentage of fibrous cap thickness increased was greatest in Group A (202.2 ± 137.7%), followed by Group B (119.3 ± 122.8%) and Group C (102.8 ± 84.2%). The prevalence of thin-cap fibroatheroma decreased in all three groups ( $p < 0.001$ ,  $p = 0.001$  and  $p = 0.002$ , respectively). Significant decreases of lipid volume index (=mean lipid arc × lipid length) were observed in Group A (-17.3 ± 22.1%,  $p < 0.001$ ) and B (-18.5 ± 30.2%,  $p < 0.001$ ), but slight increase was in Group C (12.2 ± 27.4%,  $p = 0.262$ ). Percent changes in fibrous cap thickness, in lipid volume index were correlated with HA1C ( $p = 0.022$ , and  $p = 0.001$ , respectively).

**CONCLUSIONS** Lipid-rich plaques in patients without DM showed a better response to statin than those with DM on improving plaque vulnerable characteristics. That effect was attenuated on poorly controlled diabetic patients. Baseline HA1C level was an important factor for statin-induced reduction of plaque vulnerability.

#### GW26-e1460

##### The Experience of Coronary Chronic Total Occlusions Recanalization used A "Crowbar Effect" new skill

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**OBJECTIVES** To explore the experience of coronary chronic total occlusions (CTO) recanalization used a "Crowbar Effect" new skill and the key points of the operating procedure of the new approaches improving the success rate of CTO recanalization.

**METHODS** A total of 261 patients with CTO lesions in native coronary artery were treated by percutaneous coronary intervention (PCI) from January 2007 to March 2015 in our hospital. Of them, 52 patients were treated with a new "crowbar effect" technique as crowbar group (underwent PCI via regular antegrade guide wire approach). The followed small balloon was incapable of passing through CTO lesions when guide wire passed through the CTO lesions in all cases in crowbar group. 209 patients were treated by PCI of regular antegrade guide wire approach as control group. All patients were suffered from angina pectoris (class 2-4) lasting for six months. There were no significant difference between two groups regarding gender, age and duration of vascular occlusion ( $P > 0.05$ ). There were three key points of the successful "crowbar effects", that was 1) making a guide wire cross over the CTO lesion; 2) inserting second and third guide wires along the trace of first one into the true lumen of distal vessel; 3) sending a small balloon (a diameter of 1.50 mm) into CTO lesions by repeatedly inflating balloon with high pressure (14-16 atm), which make balloon go forward 2-3 mm each inflation; 4) Withdrawing two guide wires and inserting a bigger balloon (a diameter of 2.0 mm or larger) along retained soft guide wire; 5) performing per-dilatation by inflation of balloon and implanting DES.

**RESULTS** The success rate of PCI operation (48cases, 92.3%) in crowbar group was significant higher than that (150 cases, 71.8%) in control group ( $P < 0.05$ ). The rate of coronary perforation (7.7%, 4 cases) in crowbar group was similar to that (5.7%, 12cases) in control group ( $P > 0.05$ ). All coronary perforation happened during PCI procedure were properly treated and did not lead to serious consequence. The results show the new skill (Crowbar effect) can make the small balloon of per-dilatation cross over the CTO and improve the success rate of CTO recanalization.

**CONCLUSIONS** The "crowbar effect" technique is an alternative antegrade guide wire method of CTO recanalization, is easy to operate and has high success rate making small balloon pass through the CTO lesions.

#### GW26-e1503

##### Thermodilution-Derived Coronary Microvascular Resistance and Flow Reserve in Patients With Cardiac Syndrome X

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**OBJECTIVES** Although increased coronary microvascular resistance (CMR), resulting in coronary microvascular dysfunction, is speculated